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Facts about Rats and Mice

Purdue University Cooperative Extension Service

facts about Rats & Mice

Developed cooperatively by the U.S. Fish and Wildlife Service and Purdue University Cooperative Extension Service.

The common rat (Rattus norvegicus) also known as the brown rat, Norway rat, house rat, sewer rat, gray rat, wharf rat, barn rat, etc., is the most prevalent rat in the Northern United States. This animal is not native to this country having come over with the early settlers around 1775.

The house mouse (Mus musculus), which means "little thief", is a different rodent both in habits and anatomical features. It was also an early immigrant and not native to this country.

Reproduction

Rats breed at 3 to 4 months of age and may continue to breed at monthly intervals during every month of the year. The average litter size is 10, but can be as many as 20. Wild rats probably live for 8 months but individuals have been known to live beyond 3 years of age.

House mice reach maturity and breed at 2 or 3 months of age. An average of 5 young are born in each of 5 to 8 litters per year. Few wild mice survive more than a year.

Physical Characteristics and Habits

Rats may vary in color from almost pure gray to reddish brown or nearly black. Partial albinos are also found. The laboratory rat is the true albino form of the Norway rat. The average length of the adult Norway rat is 16-18 inches including the tail which is 7 to 7-1/2 inches long. Average adult weights vary from 10 to 17 ounces, the record being 44 ounces.

The house mouse is a much smaller rodent with color and color variations similar to the Norway rat. The normal adult weight varies from 1/2 to 3/4 of an ounce.

Rats and mice are color blind and their world is composed of various shades of gray. Vision is restricted in rats to several feet and to about 6 inches with mice. However, they can detect movement at considerable distances. Well-developed senses of smell and taste aid them in avoiding poorly-prepared toxic baits. Hearing is exceptionally good and they can apparently recognize sounds of higher frequency than the average human ear.

The organs of touch are very sensitive hairs in the whiskers and around the body which explains why rats like to run next to walls. These sensory organs assure them that no danger can approach from that side thus counterbalancing the inadequateness of their eyesight. Regular travel routes taken by rats are readily recognized by dark greasy marks left by the animals. Rats are afraid of anything new. Even the displacement of a familiar object will disturb them for some time.

Rats and mice are good swimmers. They will sometimes swim through sewer lines and enter homes through floor drains. It is not uncommon for them to climb sewer pipes as high as the second floor and emerge from toilet stools through the water seals. A large rat can reach vertically 18 inches. With a

running start, he can jump 3 feet or more and from a standing start about 2 feet. He can jump a horizontal distance of 8 feet while dropping less than 14 feet. Rats have been known to fall to the ground from a four-story building without apparent harm. It is possible for young rats to get through openings 1/2 inch in diameter. Mice can get through openings 1/4 inch in diameter. Hence, in mouseproofing, holes the diameter of a pencil should be closed.

The front incisor teeth of a rat grow at the rate of 5 inches a year. Therefore, the rat must gnaw to live. If the new growth is not worn down by constant gnawing, the teeth will curve back in the form of tusks and the animal will die of starvation. Rats can gnaw through lead pipes, work through 3 inches of poorly-mixed concrete, cut through oak planks or sun-dried bricks.

While the Norway rat is primarily a burrowing animal, it can climb when necessary. However, it prefers to live in burrows that are from 8 to 18 inches below the surface of the ground. A long established colony may have a maze of tunnels extending the length of a city block. In light sandy soil, they have been known to burrow as deep as 6 feet.

Rats usually start their search for food and water after sunset each day. They apparently feed twice during the night; once shortly after dark and again in the early morning. The average adult rat needs 3/4 to 1 ounce of dry food and 1-1/2 ounces of water every 24 hours. Without food, they will start to weaken in 3 to 4 days, but without water, weakness sets in after about 1 to 2 days. Mice are not as reliant upon water. In fact, mice have been kept in captivity on dehydrated food containing less than 5 per cent moisture with no free water for periods up to 12 months. This difference is a factor to consider in baiting for both species.

A house mouse eats about 10 per cent of its body weight every 24 hours, but this is taken in a number of interrupted feedings. Mice are primarily seed and grain eaters but high protein foods and sweet foods are often attractive. If food and shelter are present and they are undisturbed, mice may spend their entire life span within a 25 foot range. Rats generally travel over a wider area but their movements are also correlated with the sufficiency of food, shelter, and water in their immediate vicinity. Rats that are disturbed, however, may move as much as 4 miles in the space of a week.

Rats will take almost any food that either man or domestic animals eat, which explains the great ease with which they adapt themselves to almost any environment. While they can thrive on garbage, decaying meat, and other spoiled foods, rats prefer choice, clean, and fresh food.

Control

The best control of rats and mice is to take away the food and shelter that permits them to survive. Traps, gases, and poisons will only temporarily halt a growing rat population.

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